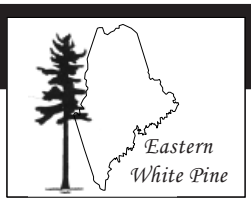
Forest Health Highlights

Maine



June 1998

The Resource

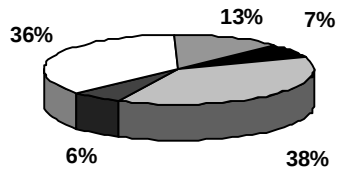
Maine's forests provide much of the raw materials to fuel its mills and serve as the backdrop for the recreation industry. These forest-based industries employ more than 12% of Maine's workforce and generate over 11% of the state's payroll. The overall annual contribution of the forest resource to Maine's economy exceeds $8.5 billion. The forests of the state also provide watershed, environmental, wildlife, and recreational benefits. Forested parks and individual shade trees provide similar amenities in urban and suburban settings.

90 % of the state is forested (17,689,000 acres)

Out of the forested area:

- **95.7 % timberland**
- **4.3 % non commercial or reserved forestland**

Major Forest Types:



Special Issues

The greatest forest health issue in Maine continues to be the public perception that current **forest management** practices are not sustainable and that there is a need to assure long-term environmental and economic stability. While ongoing regional monitoring projects such as the Forest Health Monitoring Program, the North American Maple Project, and the periodic US Forest Service Forest Inventory and Analysis provide considerable information, these efforts have fallen short of what the public sees as necessary to answer forest sustainablity questions. To address that shortfall, the Maine Legislature has funded a new initiative within the Maine Forest Service to conduct an annualized inventory of Maine's forest resources.

Some of the greatest recent impacts have been from the **January ice storm**. Over 11 million acres of rural, urban and community forests in the central part of the state were affected to various degrees. The extent of damage is being assessed through aerial surveys, aerial photography, and ground surveys. The surveys will document which tree species and what age classes were most affected. Besides the regional surveys, revisits to Forest Inventory and Analysis plots throughout the damage area will provide further information on the impact from the storm. The assessment information will help to develop prescriptive forest management recommendations.

Several **cooperative projects** are underway to address forest pest problems in the state. To assess the natural recovery process following the **spruce budworm** outbreak in the 1970s and 1980s, the Maine Forest Service has been monitoring forest decline and recuperation in forest stands in Baxter Park. These data will help evaluate the effectiveness of forest management practices. Concerns over the issue of biodiversity led to the development of an **insect and disease database**, which currently contains over 37,000 insect and disease records from 1970 to 1995 and is continuously expanding. In addition, through a Maine Outdoor Heritage Fund Grant, the vast **forest insect collections** from the Maine Forest Service, the University of Maine, and the Department of Environmental Protection are being computerized, using a relational database and geographic information system to track location. These data will be available through the internet.

Special Issues cont.

Spruce beetle continues to affect areas along central coastal Maine and offshore islands. Almost 3,000 acres exhibit 30 to 50 percent mortality, with the largest areas of infestation on Islesboro, Cape Rosier, Isle Au Haut, and the Spruce Head Islands. The outbreak has increased in area and intensity, especially on white and red spruce greater than 15 inches in diameter. Eastern dwarf mistletoe is also affecting some of the same trees. Technical assistance and informational materials have been provided to landowners, and several salvage operations have occurred.

Another insect has caused increased damage in the past few years, the **yellowheaded spruce sawfly**. Black spruce plantations in northcentral Maine are particularly affected. Aerial spray projects in several townships were conducted by landowners to reduce growth loss and tree mortality.

For a couple of years, **white pine** has exhibited browning foliage symptoms from a variety of causes. Damage is more severe on sites where soil conditions are conducive to drought stress which occurred in 1995.

Most of the **defoliators**, such as gypsy moth, hemlock looper, satin moth, and spruce budworm, remain at low levels and have caused little damage statewide.

The **browntail moth**, continues to be an expanding problem around Casco Bay. While not a serious pest of forest stands, concerns over the nuisance and health effects caused by the larval hairs have led to control projects in several communities. Aerial spray projects utilized Dimilin, and various registered pesticides were used in ground-based applications. The Maine Forest Service and US Forest Service are continuing to work to develop an effective formulation of Bt (a biological insecticide) to be used in the most sensitive areas.

Regional Surveys

Interest in regional forest condition prompted the implementation of the National Forest Health Monitoring Program and the North American Maple Project.

FOREST HEALTH MONITORING PROGRAM

The objective is to assess trend in tree condition and forest stressors. All of the New England States have been involved since the program was initiated in 1990. Results indicate that there has been minimal change in crown condition in the last 8 years. In 1997, 98 percent of trees greater than 5 inches diameter had normal crown fullness. About 97 percent of the trees had little or no crown dieback, and 78 percent showed no measurable signs of damage. The most common damage was decay indicators, which were more evident on hardwoods than softwoods. Additional surveys indicate there are concerns for individual species such as ash, butternut and hemlock due to various damage agents.

Forest Health Monitoring Sites

NORTH AMERICAN MAPLE PROJECT

This cooperative project with Canada was initiated in 1988 to look at change in sugar maple tree condition. There are several states in the Northeast involved including New York, New Hampshire, Vermont, Maine, and Massachusetts. Overall, sugar maple located within the sample sites are in good condition. Periodically, insect defoliation has affected crown condition in some areas. There was little difference found between sugarbush and non sugarbush stands.

For More Information

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